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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,837	05/26/2006	Akihide Shiratsuki	291179US3PCT	8308

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

COLON SANTANA, EDUARDO

ART UNIT	PAPER NUMBER
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2837

NOTIFICATION DATE	DELIVERY MODE
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01/08/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/580,837	Applicant(s) SHIRATSUKI ET AL.	
	Examiner Eduardo Colon-Santana	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9 and 12 is/are rejected.
- 7) ☒ Claim(s) 6-8, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/26/06; 8/2/06; 7/15/08</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 5/26/2006, 8/02/2006 and 07/15/2008 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 9 and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Masaki Takanobu JP 03-067882.

Referring to claims 1 and 12, Takanobu discloses an elevator driving system with an abnormality detecting device that detects and prevents slippage of an elevator rope as claimed (see figure 1 and respective portions of the specification). Takanobu depicts from figure 1, a car (10); a rope; a pulley (7) around which the main rope is wound; a pulley sensor (6) for generating a signal in accordance with the rotation of the main rope as being rotated by motor (5) ; a rope speed sensor (15) for detecting a movement speed of the rope. Furthermore, Takanobu depicts from figure 1, a processing device (20, 21) including a first speed detecting portion for obtaining a speed of

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the car (10) based on the signal of the pulley sensor (6) and a second speed detecting portion for obtaining a speed of the car based on information on the movement speed of the rope sensor respectively; and a determination portion (22) for detecting absence/presence of slippage between the rope and the pulley by obtaining a speed of the car based on information from the pulley sensor (6) and a speed of the car based on information from the movement speed of the rope speed sensor (15) and comparing the speeds of the car with each other. Moreover, Takanobu depicts a control portion (23) for controlling operation of an elevator based on the information from the processing devices (20, 21) (see Abstract).

As to claim 2, Takanobu clearly depicts from figure 1 the first and second detecting portion (20, 21) having control circuits which would calculate the car position and speed based on information on a rotational position of the pulley (7) and the position of the car (10).

Referring to claim 9, Takanobu clearly describes in the abstract and figure 1, that slippage detection is done by measuring a movement speed of a portion of the rope wound around the pulley (see rope speed sensor 15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time

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the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable and obvious over Masaki Takanobu in view of Hiroshi Araki JP 2004123279.

Referring to claims 3-5, Takanobu addresses all the limitations of claim 1 above, but does not explicitly describe that the pulley sensor is an encoder including a Doppler sensor having an intercepting member that intercepts the reflected wave. However, Araki discloses an elevator control device (see figure 1) which uses a car speed encoder being a Doppler sensor (60a, 60b, 60c) being provided at on the upper and lower end of the hoistway for obtaining the speed of the car by measuring a difference between a frequency of an oscillating wave irradiated toward a reflecting surface in the car and a reflected wave on the reflecting surface (see also pars. [0008-0009]). Since Takanobu

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and Araki are in the same field of endeavor regarding elevator systems, the purpose disclosed by Araki would have been recognized in the pertinent art of Takanobu. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a Doppler sensor as taught by Araki within the teaching of Takanobu for the purpose/advantages that Doppler sensors give a better accuracy of the measurement of speed, offering a higher probability of getting the reflected wave detected, which leads to improved overspeed detection, preventing slippage on the elevator system.

Allowable Subject Matter

4. Claims 6-8, 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 6: The prior art does not teach or fairly suggest an elevator rope slippage detecting device having the rope sensor include a gap sensor for measuring the movement speed of the rope by reading a variation period of a gap wherein irregularities are formed in the surface of the rope.

Claims 10 and 11: The prior art does not teach or fairly suggest an elevator rope slippage detecting device having a pair of rollers or a pair of rope pinching portions, wherein the rope sensor measures a

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movement speed of a portion of the rope tensioned between the pair of rollers or between the pair of rope pinching portions.

Conclusion

5. The prior art made of record in form 892 and not specifically relied upon is considered pertinent to applicant's disclosure to further show the state of the art.

With regards to Kugiya et al. '657, he discloses an elevator system having an overspeed detection to prevent slippage. Nomura et al. '259 and Ito Kazumasa discloses elevator systems having a pulley sensor to detect overspeed. Kiyoshi discloses an elevator system having brake control system that prevents rope slippage. Brooks '676 and Hojo et al. '712 disclose a general use of a gap sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon-Santana whose telephone number is (571)272-2060. The examiner can normally be reached on Monday thru Friday 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eduardo Colon-Santana/
Patent Examiner
Art Unit 2837

/ECS/
December 31, 2008

/Walter Benson/
Supervisory Patent Examiner, Art Unit 2837